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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/635,983	08/07/2003	Kenneth Allen Windhorst	C-7220	3873

7590 12/22/2005
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EXAMINER

PUTTLITZ, KARL J

ART UNIT	PAPER NUMBER
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1621

DATE MAILED: 12/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/635,983	Applicant(s) WINDHORST ET AL.	
	Examiner. Karl J. Puttlitz	Art Unit 1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The rejection under section 102/103 is maintained and repeated below.
Applicant's amendments in connection with this ground of rejection are also addressed.

Claim Rejections - 35 USC §§ 102, 103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over (U.S. patent No. 3,214,347 to Grekel et al. (Grekel).

The rejected claims are drawn to, inter alia, a process for preparation of an organic compound selected from the group consisting of carboxylic acids, ketones having boiling points from 154 C to 170 C, and esters having boiling points from about 168 C to about 250 C, comprising combining the organic compound with water to form a mixture of the organic compound and water comprising from about 100 ppm to about

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50,000 ppm water. The claims have been amended to require that the organic compound has a stable APHA color value of 15 or less. See claim 1

The rejected claims also cover those embodiments comprising removing a product stream comprising the organic compound from a reaction zone in which the organic compound is prepared and introducing the product stream into a distillation column having a lower portion and an upper portion wherein the upper portion and the lower portion are maintained at a temperature of about 23 C to about 250 C and at a pressure of about 10.1 kPa to about 202.6 kPa, and combining the recovered organic compound with water to form a mixture of the organic compound and water comprising from about 100 ppm to about 50,000 ppm water. See claims 10 and 14.

Grekel teaches a singular embodiment in Example 1 wherein an aqueous mixture of crude acids containing isobutyric acid and n-butyric acid, 46.5 is subjected to distillation in a conventional fractionation column. The temperature employed at the bottom of the column is about 175 C. (440 mm.) and the top tower temperature is about 132 C. (300 mm.). From the base of the column a stream is removed that contains approximately 2 percent of the n-butyric acid present in the original feed. A second column containing only water is then started up under total reflux, after which the aforesaid distillate is used as feed. Water is removed from the column under refluxing conditions. Distillate is brought overhead and allowed to stratify into an upper organic layer that contains 4.0 percent of the n-butyric acid present in the aforesaid original feed. The n-butyric acid is then further purified by distillation to a APHA color value of 5. See description bridging columns 1 and 2.

The difference between the process set forth in the rejected claims and the process set forth by Grekel is that Grekel fails to specifically teach the at the end of the disclosed process, water is combined with butyric acid. However, given the broadest reasonable interpretation of the term "combing" in the context of the instant claims, those of ordinary skill would consider the disclosed steps in Grekel of adding a stream comprising n-butyric acid to the second column and further purifying n-butyric acid as combining with water. See M.P.E.P. § 2111 ("During patent examination, the pending claims must be "given *>their< broadest reasonable interpretation consistent with the specification." >*In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000).<").

Therefore, the step of combining an organic compound with water is well within the motivation of those of ordinary skill, based on Grekel, and therefore, the claims are anticipated within the meaning of section 102, or prima facie obvious under section 103, since this reference teaches the elements of the rejected claims with the requisite particularity and with a reasonable expectation of success.

Applicant argues that Grekel is silent regarding the stability of the butyric acid produced according to his disclosure. Furthermore Grekel does not add water to n-butyric to produce an organic compound that has a stable APHA color value of 15 or less. In fact, Grekel recycles the water and replaces only the portion of the water removed with impurities. However, as stated above, given the broadest reasonable interpretation of the term "combing" in the context of the instant claims, those of ordinary

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skill would consider the disclosed steps in Grekel of adding a stream comprising n-butyric acid to the second column and further purifying n-butyric acid as combining with water, or alternatively, producing the acid products in water and then removing the water. With regard to those comments regarding the required color values, those of ordinary skill that during the purification process, the water content would be within the range claimed, and have the required color value. There is no objective evidence to the contrary on record.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl J. Puttlitz whose telephone number is (571) 272-0645. The examiner can normally be reached on Monday to Friday from 9 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter, can be reached at telephone number (571) 272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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